Service Learning at The University of Iowa:

Learning to Serve and Serving to Learn

THE UNIVERSITY OF IOWA

Courses

Literature and Society: Capturing Animals

Teresa Mangum, Associate Professor, English and International Studies

Lindsay Hocker, Senior majoring in Journalism & Mass Communications and Religious Studies, Milan, IL

Design for the Developing World

Craig Just, Assistant Research Engineer, Civil and Environmental Engineering

Aaron Gwinnup,Junior majoring in Civil Engineering, Iowa City, IA

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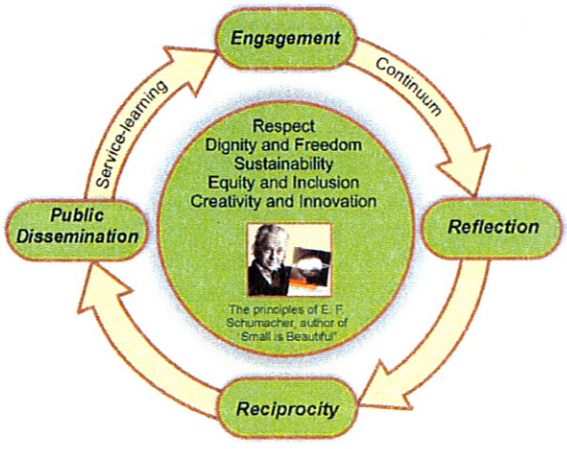
Click the video to view in playback

Service Learning in Design for the Developing World



Water Purification Processes

WATER COLLECTION — **POOR SAFETY**

Always collect water from the cleanest source possible

WATER FILTRATION — **BETTER SAFETY**
(Sand Filtration, Cloth, etc.)

Removes Suspended Solids
Improves Taste and Color
Removes Protozoan Pathogens
Increases Disinfection Effectiveness

WATER DISINFECTION AFTER FILTRATION — **HIGHER SAFETY**

Chemical
SODIS
Ultraviolet

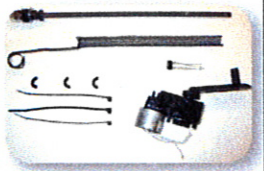
To Kill and Prevent
Diarrhea-Causing Agents, Cholera, Salmonellosis, Shigellosis, Amoebiasis

Inexpensive Electrode Kit for Bleach Generation From Salt Water

$5

University of Iowa Electrode Kit

Contains
Mixed Metal Oxide Anode
Stainless Steel Cathode
Neoprene Spacers, Nylon Ties, Nuts & Washers



- **Inexpensive**
- **Easy to Assemble, Clean and Repair**
- **Adaptable to a Variety of Available Housing Materials**

$130

Commercially Available Bleach Generator

- **Easy to Use and Robust**
- **Compact and Aesthetically Pleasing**
- **Expensive**
- **Difficult to Repair**

Electrolytic Bleach Generation

Chloride → (Electricity) → Intermediate Chlorine Species → (Equilibrium) → Bleach


Household Water Treatment and Safe Storage
WATER FILTRATION
(Slow Sand Filter)
SAFE STORAGE
(CDC Safe Water System)
WATER DISINFECTION
(University of Iowa Bleach Generator)